The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A beam homogenizer comprising:

a cylindrical lens for converging a laser light in a width direction; and

a light guide for homogenizing an energy distribution of the laser light along the width direction of a line-shape on an irradiated surface,

wherein a beam spot of the laser light is shaped into the line-shape on the irradiated surface, [[and]]

wherein the light guide comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface.

2. (Canceled)

3. (Currently Amended) A beam homogenizer comprising:

a cylindrical lens for converging a laser light in a width direction; and

a light pipe for homogenizing an energy distribution of the laser light along the width direction of a line-shape on an irradiated surface,

wherein a beam spot of the laser light is shaped into the line-shape on the irradiated surface, [[and]]

wherein the light pipe comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface.

4. (Canceled)

5. (Currently Amended) A beam homogenizer comprising:

a first cylindrical lens for converging a laser light in a width direction;

a light guide for homogenizing an energy distribution of the laser light along the width direction of a line-shape on an irradiated surface; and

at least one second cylindrical lens for condensing the laser light output from the light guide along the width direction of the line-shape on the irradiated surface,

wherein a beam spot of the laser light is shaped into the line-shape on the irradiated surface, [[and]]

wherein the light guide comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface.

6. (Canceled)

7. (Currently Amended) A beam homogenizer comprising:

a first cylindrical lens for converging a laser light in a width direction;

a light pipe for homogenizing an energy distribution of the laser light along the width direction of a line-shape on an irradiated surface; and

at least one second cylindrical lens for condensing the laser light output from the light pipe along the width direction of the line-shape on the irradiated surface,

wherein a beam spot of the laser light is shaped into the line-shape on the irradiated surface, [[and]]

wherein the light pipe comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface.

8. (Canceled)

9. (Currently Amended) A beam homogenizer comprising:

a unit for homogenizing an energy distribution of a laser light along a length direction of a line-shape on an irradiated surface;

a cylindrical lens for converging the laser light in a width direction; and

a light guide for homogenizing the energy distribution along the width direction of the line-shape on the irradiated surface,

wherein the unit has at least a cylindrical lens array,

wherein a beam spot of the laser light is shaped into the line-shape on the irradiated surface, [[and]]

wherein the light guide comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface and the length direction is a direction of a long side of the line-shape on the irradiated surface.

10. (Canceled)

11. (Currently Amended) A beam homogenizer comprising:

a unit for homogenizing an energy distribution of a laser light along a length direction of a line-shape on an irradiated surface;

a cylindrical lens for converging the laser light in a width direction; and

a light pipe for homogenizing the energy distribution along the width direction of the line-shape on the irradiated surface,

wherein the unit has at least a cylindrical lens array,

wherein a beam spot of the laser light is shaped into the line-shape on the irradiated surface, [[and]]

wherein the light pipe comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface and the length direction is a direction of a long side of the line-shape on the irradiated surface.

12. (Canceled)

13. (Currently Amended) A laser irradiation apparatus comprising:

a laser oscillator; and

a beam homogenizer,

wherein the beam homogenizer comprises a cylindrical lens for converging a laser light in a width direction and a light guide for homogenizing an energy distribution of the laser light along the width direction of a line-shape,

wherein a beam spot of the laser light is shaped into the line-shape on an irradiated surface, [[and]]

wherein the light guide comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface.

14. (Previously Presented) The laser irradiation apparatus according to claim 13, wherein the laser oscillator is a YAG laser, or a glass laser.

15. (Previously Presented) The laser irradiation apparatus according to claim 13, wherein the laser oscillator is a YVO_4 laser, a YLF laser, or an Ar laser.

16. (Currently Amended) A laser irradiation apparatus comprising:

a laser oscillator; and

a beam homogenizer,

wherein the beam homogenizer comprises a first cylindrical lens for converging a laser light in a width direction, a light guide for homogenizing an energy distribution of the laser light along the width direction of a line-shape, and at least one second cylindrical lens for condensing the laser light output from the light guide along the width direction of the line-shape,

wherein the light guide comprises two reflective surfaces facing to each other, [[and]]

wherein a beam spot of the laser light is shaped into the line-shape on an irradiated surface, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface.

17. (Previously Presented) The laser irradiation apparatus according to claim 16, wherein the laser oscillator is a YAG laser, or a glass laser.

18. (Previously Presented) The laser irradiation apparatus according to claim 16, wherein the laser oscillator is a YVO_4 laser, a YLF laser, or an Ar laser.

19. (Currently Amended) A laser irradiation apparatus comprising:

a laser oscillator; and

a beam homogenizer,

wherein the beam homogenizer comprises a cylindrical lens for converging a laser light in a width direction and a light pipe for homogenizing an energy distribution of the laser light along the width direction of a line-shape,

wherein a beam spot of the laser light is shaped into the line-shape on an irradiated surface, [[and]]

wherein the light pipe comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface.

20. (Previously Presented) The laser irradiation apparatus according to claim 19, wherein the laser oscillator is a YAG laser, or a glass laser.

21. (Previously Presented) The laser irradiation apparatus according to claim 19, wherein the laser oscillator is a YVO_4 laser, a YLF laser, or an Ar laser.

22. (Currently Amended) A laser irradiation apparatus comprising:

a laser oscillator; and

a beam homogenizer,

wherein the beam homogenizer comprises a first cylindrical lens for converging a laser light in a width direction, a light pipe for homogenizing an energy distribution of the laser light along the width direction of a line-shape, and at least one second cylindrical lens for condensing the laser light output from the light pipe along the width direction of the line-shape,

wherein the light pipe comprises two reflective surfaces facing to each other, [[and]]

wherein a beam spot of the laser light is shaped into the line-shape on an irradiated surface, and

wherein the width direction is a direction of a short side of the line-shape on the irradiated surface.

23. (Previously Presented) The laser irradiation apparatus according to claim 22, wherein the laser oscillator is a YAG laser, or a glass laser.

24. (Previously Presented) The laser irradiation apparatus according to claim 22, wherein the laser oscillator is a YVO_4 laser, a YLF laser, or an Ar laser.

25. (Currently Amended) A method of manufacturing a semiconductor device, comprising the steps of:

forming a non-single-crystal semiconductor film on a substrate;

generating a laser beam with a laser beam oscillator;

using at least a cylindrical lens array, a cylindrical lens and a light guide to shape the laser beam so as to form a linear beam spot of a laser light on an irradiated surface with its energy distribution along a width direction homogenized;

setting the substrate with the non-single-crystal semiconductor film formed thereon on a stage to make a surface of the non-single-crystal semiconductor film coincide with the irradiated surface; and

performing a laser annealing of the non-single-crystal semiconductor film by irradiating the semiconductor film surface with the linear laser light while causing the stage to scan relative to the laser light,

wherein the cylindrical lens array acts on the linear beam spot along a length direction of the spot,

wherein the light guide and the cylindrical lens act on the linear beam spot along the width direction of the spot, [[and]]

wherein the light guide comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the linear beam spot and the length direction is a direction of a long side of the linear beam spot.

26. (Previously Presented) The method of manufacturing a semiconductor device according to claim 25, wherein the laser beam oscillator is a YAG laser, or a glass laser.

27. (Previously Presented) The method of manufacturing a semiconductor device according to claim 25, wherein the laser beam oscillator is a YVO_4 laser, a YLF laser, or an Ar laser.

28. (Currently Amended) A method of manufacturing a semiconductor device, comprising the steps of:

forming a non-single-crystal semiconductor film on a substrate;

generating a laser beam with a laser beam oscillator;

using at least a cylindrical lens array, a first cylindrical lens, a light guide and a second cylindrical lens to shape the laser beam so as to form a linear beam spot of a laser light on an irradiated surface with its energy distribution along a width direction homogenized;

setting the substrate with the non-single-crystal semiconductor film formed thereon on a stage to make a surface of the non-single-crystal semiconductor film coincide with the irradiated surface; and

performing a laser annealing of the non-single-crystal semiconductor film by irradiating the semiconductor film surface with the linear laser light while causing the stage to scan relative to the laser light,

wherein the cylindrical lens array acts on the linear beam spot along a length direction of the spot,

wherein the light guide, the first cylindrical lens and the second cylindrical lens act on the linear beam spot along the width direction of the spot, [[and]]

wherein the light guide comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the linear beam spot and the length direction is a direction of a long side of the linear beam spot.

29. (Previously Presented) The method of manufacturing a semiconductor device according to claim 28, wherein the laser beam oscillator is a YAG laser, or a glass laser.

30. (Previously Presented) The method of manufacturing a semiconductor device according to claim 28, wherein the laser beam oscillator is a YVO_4 laser, a YLF laser, or an Ar laser.

31. (Currently Amended) A method of manufacturing a semiconductor device, comprising the steps of:

forming a non-single-crystal semiconductor film on a substrate;

generating a laser beam with a laser beam oscillator;

using at least a cylindrical lens array, a cylindrical lens and a light pipe to shape the laser beam so as to form a linear beam spot of a laser light on an irradiated surface with its energy distribution along a width direction homogenized;

setting the substrate with the non-single-crystal semiconductor film formed thereon on a stage to make a surface of the non-single-crystal semiconductor film coincide with the irradiated surface; and

performing a laser annealing of the non-single-crystal semiconductor film by irradiating the semiconductor film surface with the linear laser light while causing the stage to scan relative to the laser light,

wherein the cylindrical lens array acts on the linear beam spot along a length direction of the spot,

wherein the light pipe and the cylindrical lens act on the linear beam spot along the width direction of the spot, [[and]]

wherein the light pipe comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the linear beam spot and the length direction is a direction of a long side of the linear beam spot.

32. (Previously Presented) The method of manufacturing a semiconductor device according to claim 31, wherein the laser beam oscillator is a YAG laser, or a glass laser.

33. (Previously Presented) The method of manufacturing a semiconductor device according to claim 31, wherein the laser beam oscillator is a YVO_4 laser, a YLF laser, or an Ar laser.

34. (Currently Amended) A method of manufacturing a semiconductor device, comprising the steps of:

forming a non-single-crystal semiconductor film on a substrate;

generating a laser beam with a laser beam oscillator;

using at least a cylindrical lens array, a first cylindrical lens, a light pipe and a second cylindrical lens to shape the laser beam so as to form a linear beam spot of a laser light on an irradiated surface with its energy distribution along a width direction homogenized;

setting the substrate with the non-single-crystal semiconductor film formed thereon on a stage to make a surface of the non-single-crystal semiconductor film coincide with the irradiated surface; and

performing a laser annealing of the non-single-crystal semiconductor film by irradiating the semiconductor film surface with the linear laser light while causing the stage to scan relative to the laser light,

wherein the cylindrical lens array acts on the linear beam spot along a length direction of the spot,

wherein the light pipe, the first cylindrical lens and the second cylindrical lens act on the linear beam spot along the width direction of the spot, [[and]]

wherein the light pipe comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the linear beam spot and the length direction is a direction of a long side of the linear beam spot.

35. (Previously Presented) The method of manufacturing a semiconductor device according to claim 34, wherein the laser beam oscillator is a YAG laser, or a glass laser.

36. (Previously Presented) The method of manufacturing a semiconductor device according to claim 34, wherein the laser beam oscillator is a YVO_4 laser, a YLF laser, or an Ar laser.

37. (Currently Amended) A method of manufacturing a semiconductor device comprising:

providing a laser light;

passing the laser light through a cylindrical lens for converging the laser light in a width direction;

passing the laser light through a light guide; and

irradiating a semiconductor film with the laser light after passing through the light guide to crystallize the semiconductor film,

wherein an energy distribution along the width direction of the laser light at a surface of the semiconductor film is homogenized by the light guide, [[and]]

wherein the light guide comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the laser light.

38. (Canceled)

39. (Currently Amended) A method of manufacturing a semiconductor device comprising:

providing a laser light;

passing the laser light through a cylindrical lens for converging the laser light in a width direction;

passing the laser light through a light pipe; and

irradiating a semiconductor film with the laser light after passing through the light pipe to crystallize the semiconductor film,

wherein an energy distribution along the width direction of the laser light at a surface of the semiconductor film is homogenized by the light pipe, [[and]]

wherein the light pipe comprises two reflective surfaces facing to each other, and wherein the width direction is a direction of a short side of the laser light.

40. (Canceled)

41. (Currently Amended) A method of manufacturing a semiconductor device comprising:

providing a laser light having a cross section perpendicular to a propagation direction of the laser light wherein the cross section has a length and a width;

increasing only the length of the cross section of the laser light;

passing the laser light through a cylindrical lens for converging the laser light in a width direction;

passing the laser light through a light guide; and

irradiating a semiconductor film with the laser light after passing through the light guide to crystallize the semiconductor film,

wherein an energy distribution of the laser light along a width direction of the cross section is homogenized by the light guide, [[and]]

wherein the light guide comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the laser light.

42. (Original) A method according to claim 41, wherein the length of the cross section of the laser light is increased by using a cylindrical lens array having a plurality of cylindrical lenses.

43. (Canceled)

44. (Currently Amended) A method of manufacturing a semiconductor device comprising:

providing a laser light having a cross section perpendicular to a propagation direction of the laser light wherein the cross section has a length and a width;

increasing only the length of the cross section of the laser light;

passing the laser light through a cylindrical lens for converging the laser light in a width direction;

passing the laser light through a light pipe; and

irradiating a semiconductor film with the laser light after passing through the light pipe to crystallize the semiconductor film,

wherein an energy distribution of the laser light along a width direction of the cross section is homogenized by the light pipe, [[and]]

wherein the light pipe comprises two reflective surfaces facing to each other, and

wherein the width direction is a direction of a short side of the laser light.

45. (Original) A method according to claim 44, wherein the length of the cross section of the laser light is increased by using a cylindrical lens array having a plurality of cylindrical lenses.

46. (Canceled)

47. (Previously Presented) The laser irradiation apparatus according to claim 13, wherein the laser oscillator is an excimer laser.

48. (Previously Presented) The laser irradiation apparatus according to claim 16, wherein the laser oscillator is an excimer laser.

49. (Previously Presented) The laser irradiation apparatus according to claim 19, wherein the laser oscillator is an excimer laser.

50. (Previously Presented) The laser irradiation apparatus according to claim 22, wherein the laser oscillator is an excimer laser.

51. (Previously Presented) The method of manufacturing a semiconductor device according to claim 25, wherein the laser beam oscillator is an excimer laser.

52. (Previously Presented) The method of manufacturing a semiconductor device according to claim 28, wherein the laser beam oscillator is an excimer laser.

53. (Previously Presented) The method of manufacturing a semiconductor device according to claim 31, wherein the laser beam oscillator is an excimer laser.

54. (Previously Presented) The method of manufacturing a semiconductor device according to claim 34, wherein the laser beam oscillator is an excimer laser.